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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,532	03/29/2005	Luigi Resconi	FE 6056 (US)	4560

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EXAMINER	
LEE, RIP A	

ART UNIT	PAPER NUMBER
1713	

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/529,532	RESCONI ET AL.	
	Examiner	Art Unit	
	Rip A. Lee	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,7,13 and 14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 7, 13 and 14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action follows a response filed on July 12, 2006. Claims 1 and 7 were amended, and claims 4-6 and 8-12 were canceled. Claims 1-3, 7, 13, and 14 are pending.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-3, 7, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohnen *et al.* (WO 99/43717 ; equivalent U.S. 6,391,989 relied upon for translation).

Bohnen *et al.* teaches a catalyst system comprising a metallocene and a compound that forms an alkyl metallocene cation. Regarding the metallocene component, the compounds Me_2Si(2-Me-4-(4-*t*-BuPh)Ind)$_2ZrCl_2$, Me_2Si(2-Me-4-(4-MePh)Ind)$_2ZrCl_2$, Me_2Si(2-Me-4-(4-EtPh)Ind)$_2ZrCl_2$, Me_2Si(2-Et-4-(4-*t*-BuPh)Ind)$_2ZrCl_2$, Me_2Si(2-Et-4-(4-MePh)Ind)$_2ZrCl_2$, Me_2Si(2-Et-4-(4-EtPh)Ind)$_2ZrCl_2$, Me_2Si(2-Me-4-(4-*t*-BuPh)Ind)$_2ZrMe_2$, Me_2Si(2-Me-4-(4-MePh)Ind)$_2ZrMe_2$, Me_2Si(2-Me-4-(4-EtPh)Ind)$_2ZrMe_2$, Me_2Si(2-Et-4-(4-*t*-BuPh)Ind)$_2ZrMe_2$, and Me_2Si(2-Et-4-(4-MePh)Ind)$_2ZrMe_2$, Me_2Si(2-Et-4-(4-EtPh)Ind)$_2ZrMe_2$ are exemplary (claim 9). Catalysts are to be used in a process for preparing polyolefin by polymerizing one or more olefins in the presence of said catalyst system (claim 10). Turning to the text for guidance, one of ordinary skill in the art learns that catalysts are preferably used in a process for copolymerizing ethylene with one or more C_3-C_{20} 1-olefins and/or one or more dienes (col. 12, lines 55-59). The patent does not show working examples of such a polymerization process, however, it is maintained that one having ordinary skill in the art would have found it obvious to arrive at the subject matter of the instant claims because Bohnen *et al.* explicitly recites use of catalysts that are essentially the same as that of the instant claims, and their use in a process for copolymerizing ethylene with one or more C_3-C_{20} 1-olefins and/or one or more dienes is adequately described by the inventors. All essential elements are disclosed in the patent, and the combination thereof flows naturally from the teachings of the prior art. As such, the skilled artisan would have expected such a process to work with a reasonable expectation of success.

3. Claims 1-3, 7, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kratzer *et al.* (WO 01/47635; equivalent U.S. 6,953,829 relied upon for translation).

Kratzer *et al.* discloses a catalyst system comprising Me_2Si(2-Me-4-(4-*t*-BuPh)Ind)$_2ZrCl_2$ and a compound that forms an alkyl metallocene cation (example 8). One also observes that a series of metallocenes that are equally useful as inventive catalyst components also have the general structure Me_2Si(4-RPh)Ind)$_2ZrX_2$ where R is alkyl or cylcoalkyl and X is Cl or Me (see columns 13-15). Note that these 4-substituted phenyl indenyl complexes meet the structural requisites outlined in the instant claims. According to the inventors, catalyst are particularly useful for copolymerization of ethylene with one or more C_3-C_{20} 1-olefins and/or one or more dienes (col. 18, lines 14-18). The patent does not show working examples of such a polymerization process, however, it is maintained that one having ordinary skill in the art would have found it obvious to arrive at the subject matter of the instant claims because Kratzer *et al.* explicitly recites use of catalysts that are essentially the same as that of the instant claims, and their use in a process for copolymerizing ethylene with one or more C_3-C_{20} 1-olefins and/or one or more dienes is adequately described by the inventors. All essential elements are disclosed in the patent, and the combination thereof flows naturally from the teachings of the prior art. As such, the skilled artisan would have expected such a process to work with a reasonable expectation of success.

4. Claims 1-3, 7, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawasaki *et al.* (U.S. 6,723,794).

Kawasaki *et al.* discloses a process for making ethylene/α-olefin/nonconjugated diene and ethylene/α-olefin polymers in the presence of catalysts comprising a metallocene of formula (II); see claim 5. According to the structure shown in claim 5, the metallocene contains a bridged *bis*indenyl ligand set in which substituent R^3 is an aryl group of 6 to 16 carbon atoms. Turning to the specification for guidance, one of ordinary skill in the art learns that compounds that meet this structural feature, Me_2Si(2-Me-4-(*p*-tolyl)Ind)$_2ZrCl_2$ and Me_2Si(2-Me-4-biphenylInd)$_2ZrCl_2$ are equally useful for carrying out the process for making ethylene/α-olefin/nonconjugated diene polymers (col. 46, lines 16 and 32). The patent does not show a

working example showing a process of making ethylene/α-olefin/nonconjugated diene copolymer using a catalyst comprising these metallocenes. One having ordinary skill in the art would have found it obvious to make a catalyst using Me_2Si(2-Me-4-(*p*-tolyl)Ind)$_2ZrCl_2$ and Me_2Si(2-Me-4-biphenylInd)$_2ZrCl_2$ from the myriad of other compounds because these compounds possess the structural features recited in the claims of Kawasaki *et al.* One having ordinary skill in the art would have found it obvious to use such catalysts for making ethylene/α-olefin/nonconjugated diene copolymer, and thereby arrive at the subject matter of the instant claims, because such an application is taught explicitly by the prior art. The combination of embodiments flows naturally from the teaching of the prior art. As such, one having ordinary skill in the art would have expected such a process to work.

Response to Arguments

5. Applicant's arguments with respect to the rejection of claims over Kawasaki *et al.* have been considered but are moot in view of the new ground(s) of rejection.

6. The rejection of claims over Bingel *et al.* (U.S. 6,492,539), Burkhardt *et al.* (U.S. 6,376,407), and Küber *et al.* (U.S. 5,840,947) has been withdrawn in view of Applicants amendments to the instant claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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September 6, 2006

LING-SUI CHOI
PRIMARY EXAMINER